AMENDMENTS TO THE CLAIMS

1-64. (Cancelled)

65. (Currently amended) A bipolar device comprising:

first and second substantially planar substrates;

a first electrode, disposed on the first substrate, having a base and a first surface for positioning proximate to an opposing, second electrode disposed on the second substrate ~~having a base and a second surface that is reticulated~~, the first ~~surface~~ electrode being reticulated so as to define a plurality of protrusions and intervening indentations providing a surface area at least 1.5 times the theoretical surface area of a smooth non-reticulating surface, wherein the protrusions have a length *l* and a cross-sectional thickness *a*, and wherein the cross-sectional thickness *a* varies along the length *l* of the protrusion such that the cross-sectional thickness, when averaged along the length of the protrusion, is less than about 100 microns, and wherein the second electrode is reticulated such that the first and second reticulating ~~surfaces~~ electrodes are interpenetrating.

66. (Previously presented) The bipolar device of claim 65, wherein the protrusions are positioned periodically, aperiodically, or randomly on the first reticulating surface.

67. (Previously presented) The bipolar device of claim 65, wherein the first surface has a surface area that is at least 2 times the theoretical area of a smooth, non-reticulated configuration.

68. (Previously presented) The bipolar device of claim 65, wherein the first surface has a surface area that is at least 2.5 times the theoretical area of a smooth, non-reticulating configuration.

69. (Previously presented) The bipolar device of claim 65, wherein the first surface has a surface area that is at least 3 times the theoretical area of a smooth, non-reticulating configuration.

70. (Previously presented) The bipolar device of claim 65, wherein the first surface has a surface area that is at least 4 times the theoretical area of a smooth, non-reticulating configuration.

71. (Previously presented) The bipolar device of claim 65, wherein the first surface has a surface area that is at least 5 times the theoretical area of a smooth, non-reticulating configuration.

72. (Previously presented) The bipolar device of claim 65, wherein the cross-sectional width *a* of the protrusion increases at cross-sections approaching the base of the first electrode.

73. (Previously presented) The bipolar device of claim 65, wherein a cross-sectional area of the protrusion at a first position near to the base of the first electrode is greater than a cross-sectional area of the protrusion at a second position that is farther from the base.

74-76. (Cancelled)

77. (Previously presented) The bipolar device of claim 65, wherein the opposing electrode is reticulated so as to define a plurality of protrusions and intervening indentations providing a surface area at least 1.5 times the theoretical surface area of a smooth non-reticulating surface, wherein the protrusions have a length *m* and a cross-sectional thickness *b*.

78. (Previously presented) The bipolar device of claim 65, wherein the opposing electrode is reticulated so as to define a plurality of protrusions and intervening indentations providing a surface area at least 1.5 times the theoretical surface area of a smooth non-reticulating surface,

wherein the protrusions have a length *m* and a cross-sectional thickness *b* and wherein the cross-sectional thickness *b* varies along the length *m* of the protrusion.

79. (Previously presented) The bipolar device of claim 78, wherein the second surface has a surface area at least 2 times the theoretical surface area of a smooth non-reticulating surface.

80. (Previously presented) The bipolar device of claim 78, wherein the second surface has a surface area at least 2.5 times the theoretical surface area of a smooth non-reticulating surface.

81. (Previously presented) The bipolar device of claim 78, wherein the second surface has a surface area at least 3 times the theoretical surface area of a smooth non-reticulating surface.

82. (Previously presented) The bipolar device of claim 78, wherein the second surface has a surface area at least 3.5 times the theoretical surface area of a smooth non-reticulating surface.

83. (Previously presented) The bipolar device of claim 78, wherein the second surface has a surface area at least 4 times the theoretical surface area of a smooth non-reticulating surface.

84. (Previously presented) The bipolar device of claim 78, wherein the second surface has a surface area at least 5 times the theoretical surface area of a smooth non-reticulating surface.

85. (Previously presented) The bipolar device of claim 78, wherein the protrusions of the second reticulating surface are positioned periodically, aperiodically or randomly.

86. (Previously presented) The bipolar device of claim 78, wherein the cross-sectional width *b* of the protrusion increases at cross-sections approaching the base of the opposing electrode.

87. (Previously presented) The bipolar device of claim 78, wherein a cross-sectional area of the protrusion at a first position near to the base of the first electrode is greater than a cross-sectional area of the protrusion at a second position that is farther from the base.

88. (Previously presented) The bipolar device of claim 78, wherein the cross-sectional area of the protrusions of the second reticulating surface increases at cross-sections approaching the base of the opposing electrode.

89-90. (Cancelled)

91. (Previously presented) The bipolar device of claim 78, wherein the second reticulating surface of the opposing electrode is complementary to the first reticulating surface of the first electrode.

92. (Previously presented) The bipolar device of claim 91, wherein the average distance between complementary reticulating surfaces is less than 100 microns.

93. (Previously presented) The bipolar device of claim 91, wherein the average distance between complementary reticulating surfaces is less than 50 microns.

94. (Previously presented) The bipolar device of claim 91 wherein the average distance between complementary reticulating surfaces is less than 25 microns.

95. (Previously presented) The bipolar device of claim 91, wherein the average distance between complementary reticulating surfaces is less than 10 microns.

96. (Previously presented) The bipolar device of claim 78, further comprising an electrolyte positioned between the complementary first and second reticulating surfaces.

97. (Previously presented) The bipolar device of claim 65, wherein the first electrode is porous.

98. (Previously presented) The bipolar device of claim 97, wherein the opposing electrode is porous.

99-128. (Cancelled)

129. (Previously presented) The bipolar device of claim 65, wherein the protrusions are positioned aperiodically on the first reticulating surface.

130-150. (Cancelled)

151. (Previously presented) The bipolar device of claim 65, wherein the first electrode is porous, the first porous electrode having an average porosity of from about 10% to about 70%.

152-160. (Cancelled)

161. (Previously presented) The bipolar device of claim 151, wherein the first electrode has an average porosity of from about 20% to about 50%.

162. (Previously presented) The bipolar device of claim 151, wherein the first electrode has an average porosity of from about 30% to about 45%.

163. (Previously presented) The bipolar device of claim 65, wherein l/a is greater than 2.

164. (Previously presented) The bipolar device of claim 65, wherein the thickness and the width of each protrusion are each a.

165. (New) The bipolar device of claim 65, wherein at least one of the first substrate and the second substrate is a current collector.